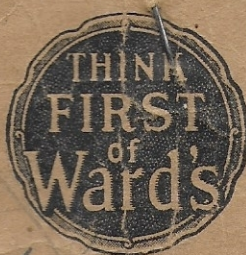


Instruction Book for Ward's

Damascus Grand Sewing Machine

Rotary Shuttle



Montgomery Ward & Co.

Satisfaction Guaranteed or Your Money Back

Chicago Kansas City St. Paul Baltimore
Portland Oakland Fort Worth Denver

Tested and Guaranteed




Every Damascus Sewing Machine is inspected and tested by sewing machine experts before it leaves the factory. It is accurately adjusted and its sewing qualities are demonstrated on all kinds of work. No machine is sent out until we are sure it is perfect in every respect. The serial number is then placed on the Gold Bond Guarantee which is packed with each machine. Keep the guarantee for future reference.

Please Read Instructions

You do not need a teacher to learn to operate your Damascus. The instructions in this book are written so the beginner can understand them and operate the machine successfully. Even if you have used many machines before, it is a good plan to read this book and become familiar with the different parts of the Damascus. Keep the book and refer to it from time to time to be sure that you are giving the machine the care it deserves.

Below Is A Copy Of The Guarantee You Receive With Your Damascus

Certificate of Guarantee

**Special
Twenty Year
Sewing Machine Guarantee**

In addition to the terms of our Complete Guarantee

WE guarantee the material and workmanship of this Sewing Machine, and that the mechanism will operate perfectly when the printed instructions packed with the machine are followed. This machine has been accurately adjusted, carefully inspected and thoroughly tested with both silk and cotton thread.

We will make good any defects in material or workmanship which develop within a period of twenty years. If at any time during the life of this guarantee it becomes necessary to send the machine to us for

repairs on account of defects in material or workmanship, we will put the machine in perfect running order without cost to the owner and will pay freight charges both ways.

Natural wear and tear of the parts are not considered defects in material or workmanship, nor does this guarantee apply to attachments, or to the breaking of needles, shuttles, bobbins or belts.

Montgomery Ward & Co.
Chicago Kansas City St. Paul Baltimore
Portland Oakland Fort Worth Denver

Machine No. _____
18333-5

THE OLDEST MAIL ORDER HOUSE IS TODAY THE MOST PROGRESSIVE

KEEP THIS BOOK FOR FUTURE REFERENCE

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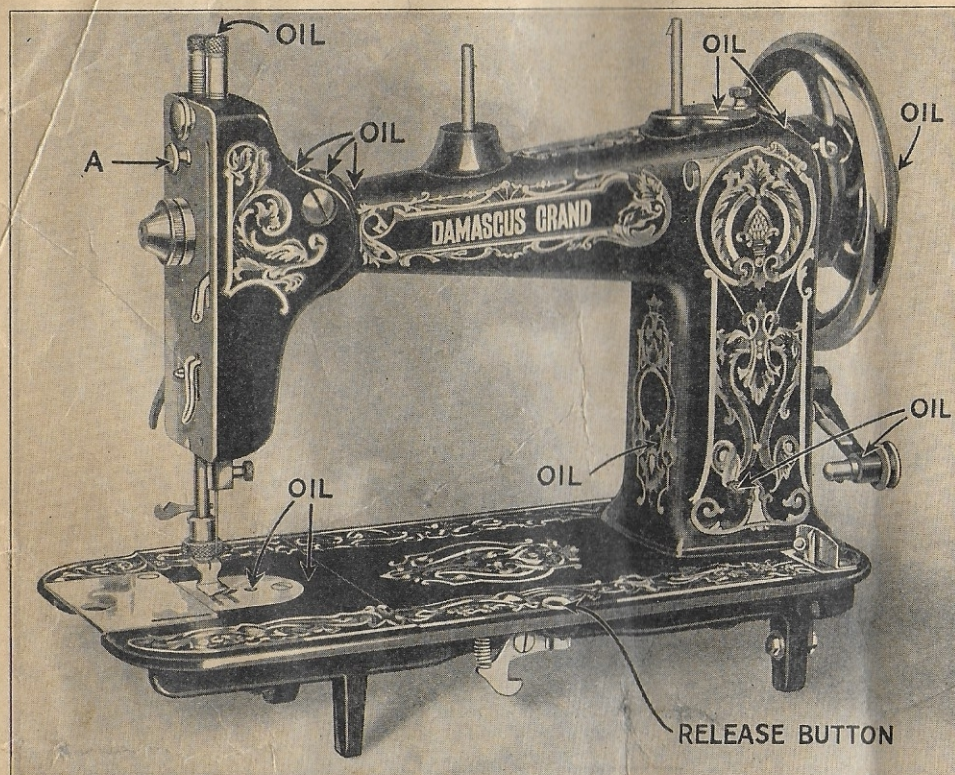
INSTRUCTIONS FOR DAMASCUS GRAND SEWING MACHINE

It Is Easy to Operate Your Damascus Grand



Turn to pages 12 and 13 for a large illustration showing the different parts plainly indicated and identified by name.

Oil Your Damascus Grand Before Sewing



Picture 2. Put a drop of oil in the oil hole on top of the needle bar, the three oil holes on the sewing head, the two holes near the balance wheel, the hole on the balance wheel, and on the bobbin winder, and the two holes on the sewing arm and two at the needle plate.

In order to run smoothly and easily a sewing machine must be oiled. If the machine is used continuously, it should be oiled every day, but if it is used only once in a while for a few hours' sewing, an occasional oiling is all that is necessary. **Use only good sewing machine oil** and do not put on more than is needed.

The arrows marked "Oil" in Picture 2 show just where the oil should be applied. Put **one drop of oil** at each point and wipe away any surplus oil with a soft cloth so it will not soil the work you are doing.

Oil a Little and Often

Make it a habit to oil your machine as often as it is needed and you will be surprised at how easily and smoothly it will run, even after years of use.

A quiet, smooth running machine, that works with perfect ease is more dependent on good oil and frequent oiling than on any other one thing.

Be sure that you oil the small oil hole in the balance wheel; then it will be easier to release the brake button when you want to wind the bobbin.

If the Machine Runs Hard

The Damascus Grand is an easy running machine and if it requires any extra effort to turn it, you may be sure that some bearing has not been oiled properly or the machine is gummed down from poor oil or from long standing.

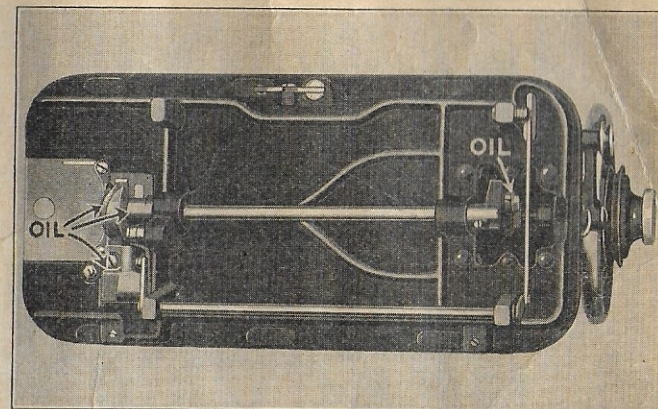
To Remove Gummed Oil

To remove gummed oil, apply a little kerosene (coal oil) on the bearings and run the machine rapidly for a few moments with the shuttle removed, then wipe clean with a soft cloth. The kerosene will wash away the gummed oil and leave the bearings clean. The machine should then be thoroughly oiled with **good sewing machine oil**.

Oil the Under Parts of the Sewing Head

There are certain places on the underside of the sewing head where oil is needed regularly. To reach the underparts of the machine, throw the belt off the hand wheel, press down on the "Release Button" (Picture 2) and turn the sewing head back on its hinges. Now refer to Picture 3 and put a drop of oil at the points marked with arrows. Be sure to put a drop of oil on the hook race back of the bobbin and wipe away any lint which may have collected around the bobbin.

Do not use any more oil than is necessary to lubricate the different parts of the machine.



Picture 3. This shows the sewing head turned back on its hinges. The arrows indicate the points where oil is needed. A drop of oil at each point is sufficient and any surplus should be wiped away.

Oil the Face Plate Parts

It is just as important to oil the parts back of the face plate as any other part of your sewing machine. Be sure to oil the face plate parts once every week you use the machine. Pull the thread out of the needle and wind it back on the spool by simply turning the spool with your hand. The thread will then be clear of the face plate and you can remove the face plate without any difficulty.

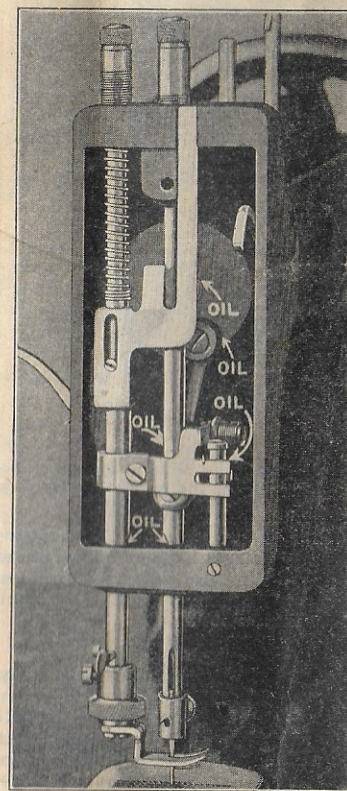
To take off the face plate remove the thumb screw that is marked "A" in Picture 2, and lift off the face plate. Put a drop of oil at every point marked "Oil" in Picture 4. If you turn the hand wheel you will notice the operation of the moving arm which moves the needle bar up and down. Be sure to oil this arm the same as every other part. Wipe away any surplus oil which might possibly drip down and on to your sewing.

To Remove Dirty Oil

If, after you have used your Damascus Grand for some time, the machine becomes dirty, or if you have by accident used poor oil and the machine is gummed up, clean it by putting kerosene in the oil holes. Run the machine for a while, then wipe off as much as possible and let the kerosene have time to dry. Then re-oil with a good grade of sewing machine oil.

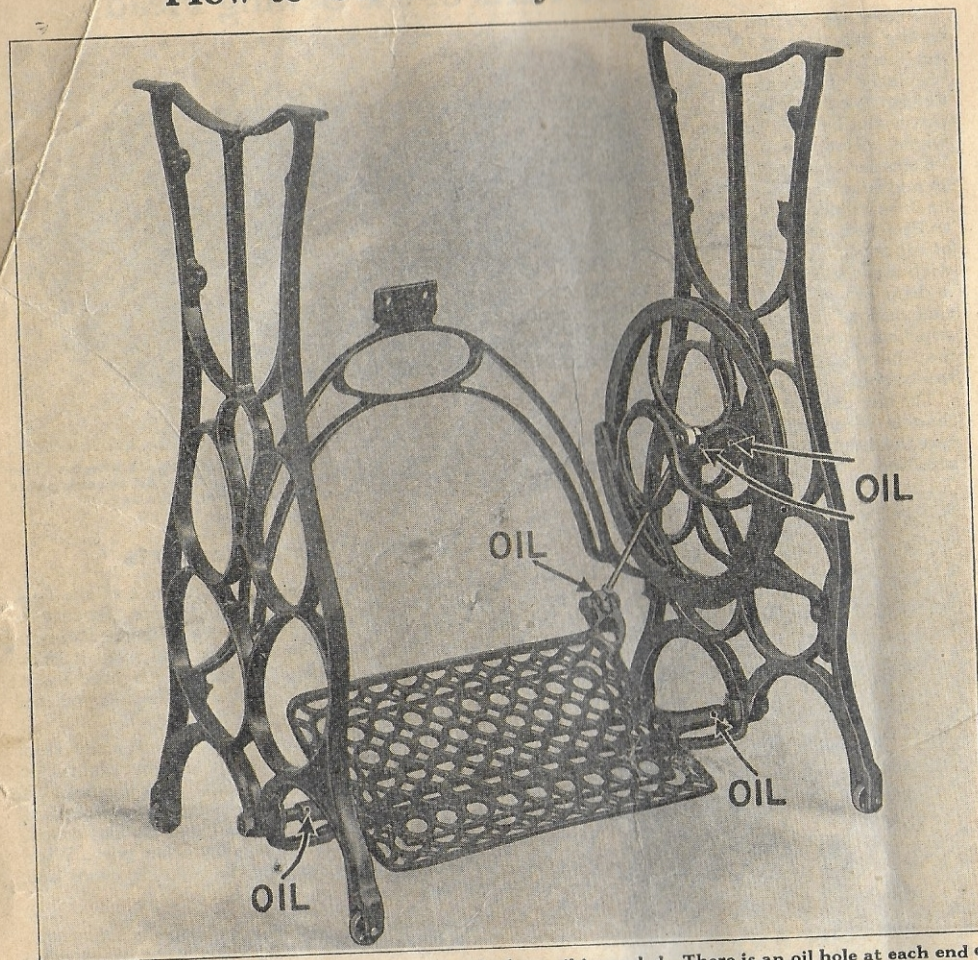
Never Change Position of Face Plate Parts

There is always the temptation when you are oiling your machine, to change some of the adjustments. **Do not change any screws to see how the parts work.** This booklet tells you on page 11 how to regulate the thread tensions which are really the only adjustments you should ever need to make.



Picture 4. Remove the face plate and oil the face plate parts regularly.

How to Oil and Adjust the Stand



Picture 5. There are only five points on the stand where oil is needed. There is an oil hole at each end of the treadle to lubricate the treadle bearings, and an oil hole in the belt wheel for the wheel stud bearing. Also put a drop of oil at each end of the pitman which connects the treadle and wheel.

Oiling the Stand

The only attention the stand will need is an occasional drop of oil at the five points marked "OIL" in Picture 5. Neglecting to oil the stand will cause the machine to run hard.

Adjusting the Belt Wheel

After several years' use, it may be necessary to take up the lost motion in the belt wheel. To do this, remove the belt and loosen the lock nut on the wheel stud on the outer side of the leg. With a screwdriver, turn wheel stud to left until lost motion is taken up, then tighten locknut.

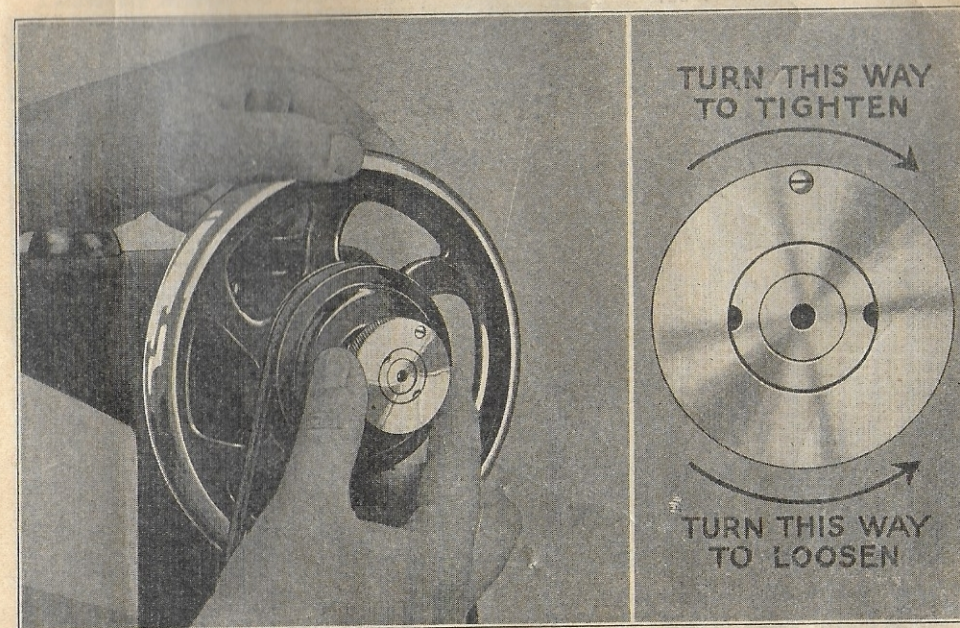
To adjust the treadle, loosen the lock nut on the outer side of the leg, and with a large screw driver, turn the center screw to right until lost motion is taken up. Then re-tighten lock nut.

The Ball Bearings

The ball bearings at both ends of the metal pitman can be adjusted if necessary. Loosen the lock nut and turn the cone bearing to left until lost motion is taken up, then tighten lock nut.

In most cases these adjustments will not be needed until after the machine has been in use for many years. Keep this book so you will have it for reference when the stand needs adjusting.

Uniform Treadle Motion Is Needed



Picture 6. To release the sewing mechanism, hold the balance wheel with your left hand and turn the brake button with your right hand. The picture at the right shows the direction to turn the brake button to tighten or loosen it. It is only necessary to turn the brake button about one half turn.

To obtain satisfactory results with any sewing machine, it should be run with a constant, uniform motion. If you are not accustomed to operating a machine, it is a good plan to practice using the treadle (without the machine being threaded) until you are able to produce a steady, even motion.

The Brake Button

The Damascus Head is supplied with a brake button so the treadle belt wheel and balance wheel can be operated without running the sewing mechanism. This feature makes it possible for you to wind bobbins without unthreading the machine or without removing partly finished work that you may be sewing on.

Release the Hand Wheel

To release the brake button, hold the balance wheel with the left hand, and with the right hand turn the brake button to the left as far as it will go (Picture 6). You will now be able to run the treadle and balance wheel without moving the sewing mechanism of the machine.

You will find it easier to produce a steady, even motion if only one foot is placed on the treadle to operate the machine. Place the foot

on the treadle so the instep is about over the center of the treadle. Now turn the balance wheel with your right hand so the **top of the wheel runs toward you**. This will start the balance wheel and treadle motion and it should be continued by an alternate pressure of the heel and toe upon the treadle.

Practice the Treadle Motion

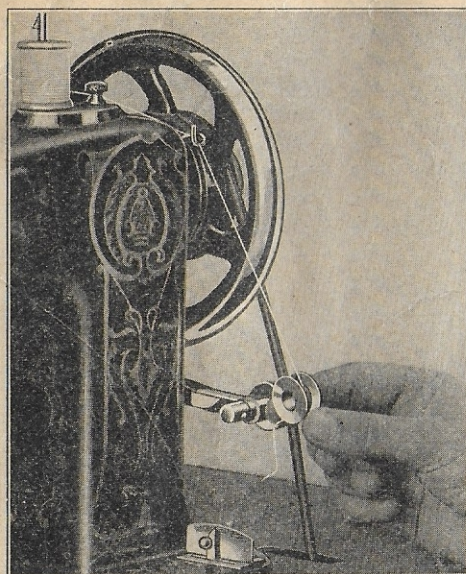
After a little practice you will be able to produce a steady, even motion of the balance wheel and you will be able to stop and re-start the machine without causing it to run backward.

When you are thoroughly familiar with the treadle motion, hold the balance wheel with your left hand and tighten the brake button by turning it to the right (Picture 6). Now raise the presser foot by means of the presser foot lifter, place a piece of cloth in position on the machine and let the presser foot down upon it. Now operate the machine and guide the work as though you were sewing.

Do not try to help the machine by pulling or pushing the work. The machine feeds the work without assistance.

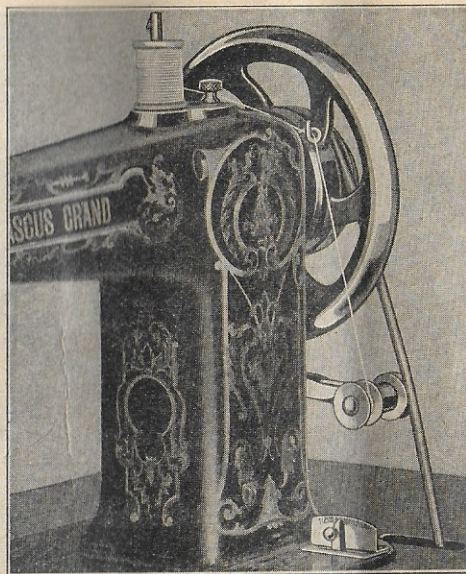
Do not run the machine with the presser foot down unless there is cloth under it, as this may injure the feed or the presser foot.

How to Use the Automatic Bobbin Winder



Picture 7. Hold the bobbin with the right hand and wind the thread several times around the hub of the bobbin as shown. Then take the bobbin in the left hand and slip it onto the spindle.

Before you start to wind the bobbin, release the hand wheel by turning the top of the brake button one half turn toward you as shown in Picture 6 on Page 5. This will permit you to



Picture 8. Here is the way the bobbin appears when it is correctly placed on the spindle. The belt fits snugly against the spindle pulley, so that the bobbin will wind the moment you press the treadle.

run the automatic bobbin winder and the balance wheel on the right hand side of the sewing machine head without running the rest of the sewing mechanism.

How to Wind the Bobbin

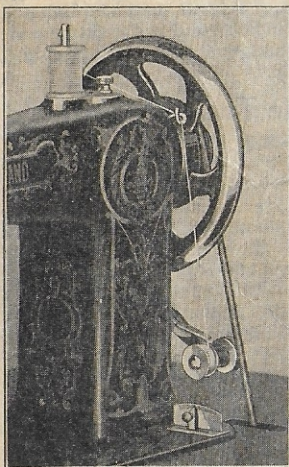
Place the spool of thread on the spool pin next to the balance wheel and bring the thread back of the thumb screw and through the looped guide. Now take the empty bobbin in the right hand, and with the left hand, wrap a few strands around the hub. (See Picture 7.) Be sure that the thread is wound in the same direction that the bobbin runs when it is placed on the machine.

Place the Bobbin on the Spindle

When you have several strands of thread wound around the bobbin, slip the bobbin over the ball spring on the spindle of the automatic bobbin winder. Raise the bobbin winder up until the lever slips into position directly in the center of the bobbin. See that the small pulley at the right makes firm contact with the belt.

Now Run the Machine

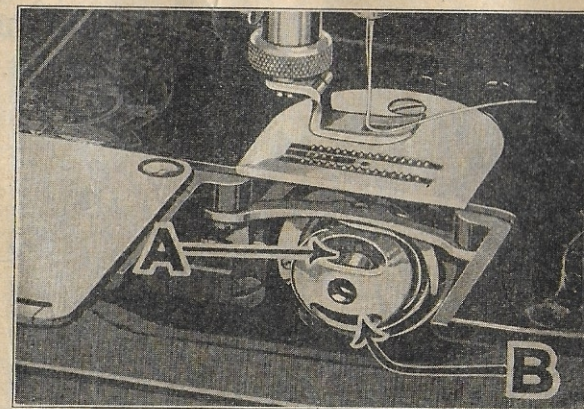
When the bobbin is in place and the belt fits against the pulley start the machine in the regular way, so that it will run towards you. When enough thread has been wound on the bobbin the bobbin winder will automatically release and drop down and away from the belt. (Picture 9.) Then slip the filled bobbin off the spindle.



Picture 9. The bobbin winder will automatically drop down when enough thread is wound.

How to Remove the Bobbin Case

You will find the bobbin case in the bobbin case holder as shown in Picture 10 when you receive your machine. In order to wind the bobbin and thread the case it will be necessary to remove the bobbin case. Raise the needle to its highest point as it will be in the way if it is left in the lowered position. Then turn the nicked bobbin slide to the left and back as far as it will go. Grasp the bobbin case with the left hand, the thumb at point "A" and the forefinger at "B", and pull the bobbin case to the left. Then take the bobbin out of the bobbin case. The bobbin should be wound with thread as described on the preceding page.

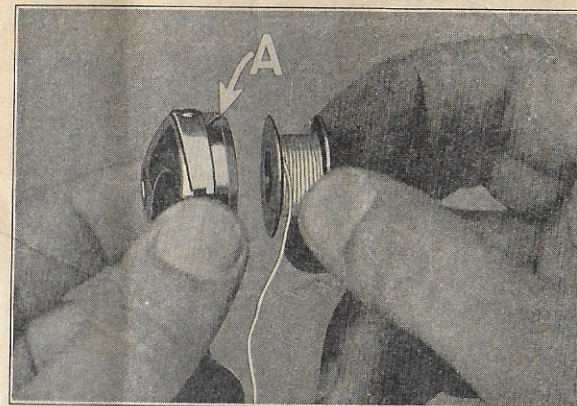


Picture 10. Turn the nicked case cover back so that you can take hold of the bobbin case with your thumb and forefinger and lift it out.

How to Thread the Bobbin Case

After you have wound the bobbin with thread place the bobbin in the case. (Picture 11.) The bobbin must fit into the case so that the thread moves easily. When you have put the bobbin inside the case draw the thread through the slit A in Picture 11, and around the metal spring illustrated by Picture 12. To complete the threading, pull the thread down, underneath the end of the spring and in the slot as shown at the right in Picture 12.

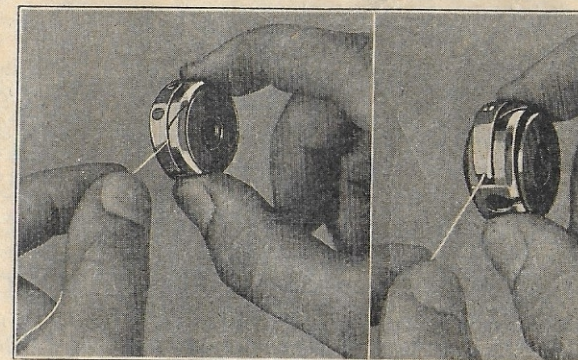
The bobbin and bobbin case are two of the most vital parts of your sewing machine. In order to withstand friction and constant usage they are made of highest grade steel.



Picture 11. Place the bobbin in the case, so that the bobbin unwinds in the same direction that the thread runs in the case. The thread goes into the case at "A."

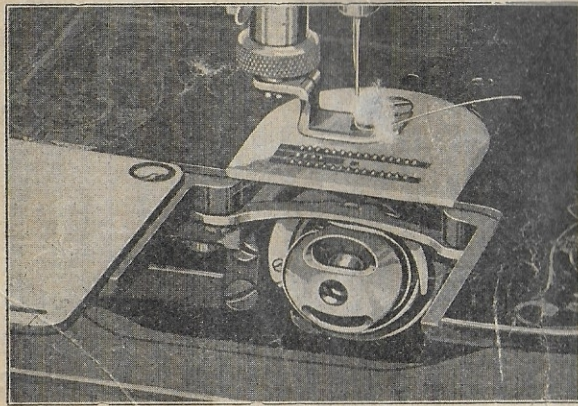
In Case of Accident to Your Bobbin

If the steel shell of the bobbin case should become damaged, or if the bobbin should become fast in the case, your machine will not sew evenly, if it sews at all. Always write the Montgomery Ward & Co. house where you bought your sewing machine and tell us immediately if something goes wrong which you are unable to fix. Perhaps we can offer a remedy which will quickly put your machine back into running order. Always write before you send the bobbin or any part of your sewing machine back to us.



Picture 12. Pull the thread down to the right of the spring and then underneath the hook at the lower end of the spring.

How to Put the Bobbin Case on the Hook



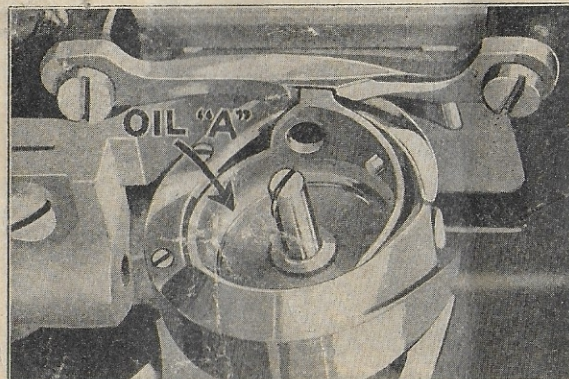
Picture 13. The bobbin case will fit evenly onto the hook if the pin slips in the slot on the bobbin case. This brings the needle hole directly under the needle.

Grasp the bobbin case as already shown by the thumb and forefinger of your left hand. Hold the case tipped up slightly so that the bobbin will not fall out of the case. The circular hole which the needle passes through should be on top. You will also notice a small slot to one side of the bobbin case needle hole. When you place the bobbin case on the hook this slot should slip over a small pin just inside the bobbin case holder. When placing the bobbin case in position, be sure to allow the thread to extend at least one or two inches outside of the case.

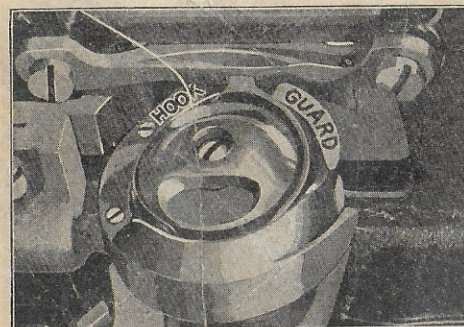
If the thread breaks when you start sewing it is possible that the bobbin case is improperly threaded or the tension is too tight. For adjusting the lower thread tension see page 11.

Oil the Hook Race Regularly

The hook race of your Damascus machine should be oiled every time you sew with it. You will have to tip back the sewing head to get at the hook race. First slip the belt off the hand wheel and press the nicked spring button on the front of the machine plate. Now you can tip back the machine head. Take out the bobbin case and bobbin, and put a few drops of oil in the hook race at about the spot marked "A" in Picture 15. Bring the sewing head back into position. Do not put too much oil on the hook race as it may get into the bobbin case and soil the thread.



Picture 14. When you take out the bobbin case and bobbin to oil the hook race, wipe off all the surplus oil so that it will not seep into the thread.



Picture 15. The hook guard makes it possible to use various kinds and sizes of thread when you sew. It also helps to prevent thread from tangling up in the bobbin.

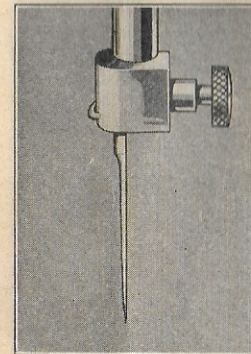
The Hook Guard

The illustration on the right gives a good view of the hook guard as it is fastened to the hook with two screws. The point of the guard throws the thread outside the hook point. This action prevents the bobbin thread from becoming tangled and stopping the machine. This guard also helps the sewing machine to do good work on all kinds of material, and with any thickness of thread.

The Bobbin Case Slide

If the bobbin case slide works loose or will not stay tightly closed, insert a screwdriver in the long slot in the cover and expand the slot, so that it will make a tight fit.

How to Insert the Needle in the Needle Clamp



Picture 16. Insert the needle in the needle clamp with the flat side of the shank to the right as you sit facing the machine.

Use only good needles and the proper size to suit the material upon which you are sewing. Consult the table at the bottom of Page 11 and choose the proper size thread for the work you are doing; then select the right size needle for the thread you will use. Never attempt to use a bent needle or one with a blunt or hooked point.

To insert the needle, turn the balance wheel until the needle bar is raised to its highest position. Loosen the thumb screw on the right side near the bottom of the needle bar. Take the needle between the thumb and first finger of your left hand and turn it until the **flat side of the shank is to the right**. Now place the shank of the needle as far as it will go up into the needle clamp, and tighten the thumb screw. Turn the balance wheel over slowly and see that the point of the needle passes a little to the right of the center of the hole in the needle plate. The needle should pass midway between the prongs of the presser foot. The presser foot can be adjusted to the right or left if necessary.

You cannot expect to do fine sewing with uneven, rough thread or with poorly made needles that do not fit the machine properly. We carry only the best grade needles. When ordering be sure to state size wanted and give the full name, number and date of guarantee of your machine.

How to Thread the Machine

At first you will find it easier to thread the machine with the presser foot in the lowered position as this will give more room near the eye of the needle. As you become more familiar with your machine, you will be able to thread it with the presser foot in either the raised or lowered position.

Put the spool of thread on the spool pin and pull the end of the thread to the left in front of the needle bar.

Pass the thread down and toward you between the thread disks and once around the tension pulley.

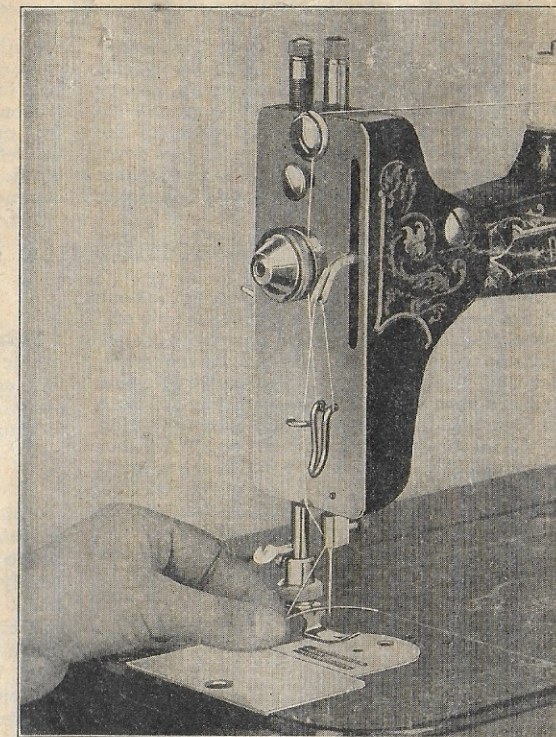
The thread should pass down on the near side of the pulley, then back under the bottom of the pulley, up at the back and then down again on the near side of the pulley and under auxiliary spring.

Pass the thread up on the near side of the auxiliary and thread it from front to back through the take-up.

Pass the thread through the guides on the face plate of the machine and on the needle clamp. These guides are self-threading and it is only necessary to pull the thread toward you from back to front of the guides in order to thread them.

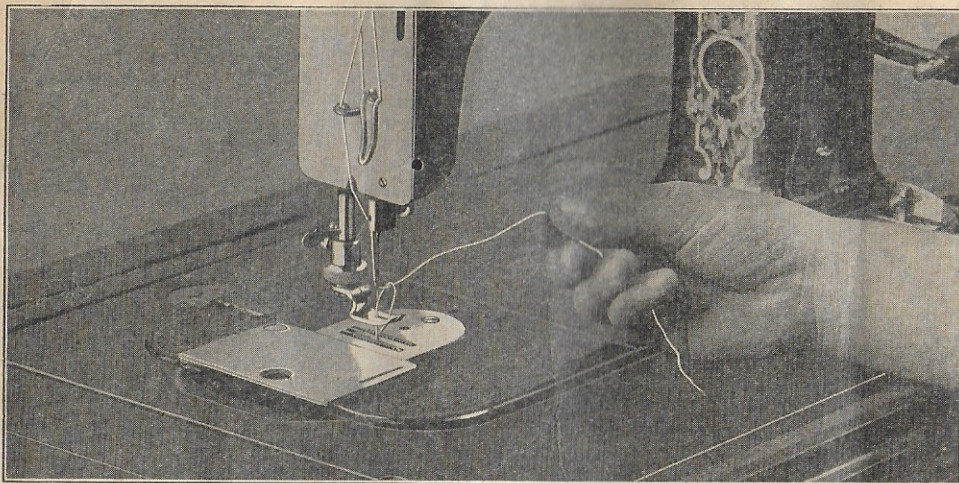
Now turn the hand wheel of the machine until the needle is at its highest point and pass the end of the thread from left to right through the eye of the needle.

If the end of the thread is frayed, wet it with your thumb and forefinger.



Picture 17. This shows the Damascus properly threaded. Be sure to follow the instructions step by step.

How to Pick Up the Bobbin Thread



Picture 18. This shows how the upper thread will pick up the lower thread in the form of a loop as you turn the machine over slowly until the needle goes down to its lowest point and up again to the highest point of its stroke. Lay both threads back under the presser foot before you commence sewing.

Pull about two or three inches of thread through the eye of the needle and hold the end of the thread with your left hand leaving plenty of slack between your hand and the needle. With your right hand, turn the hand wheel of the machine toward you until the needle goes down to its lowest point and up again to the highest point of its stroke. In making this one stroke

the upper thread will pick up the lower thread and bring it up in the form of a loop through the hole in the needle plate (Picture 18).

Now lay both threads back under the presser foot of the machine and close the slide which was left partly open when you replaced the bobbin in the bobbin case. You are now ready to commence sewing.

To Commence Sewing

By means of the presser foot lifter at the back of the sewing head, raise the presser foot and put a piece of cloth under it. Lower the presser foot and commence sewing, being sure to remember that **the top of the balance wheel runs toward you**. Practice sewing on strips of cloth until you are thoroughly familiar with the action of the machine and can stop and restart it without causing it to run backward. Practice guiding the material until you can make straight, true seams and do not try to help the material by pushing or pulling it. The machine will feed the material at just the right speed and if you push or pull it, you may cause the needle to strike the presser foot or the needle plate and break the needle or thread or both.

When the machine is threaded, do not run it without material under the presser foot as this will cause threads to snarl and may bend needle.

Never let the presser foot down on the feed when the machine is running unless there is cloth between, as this would injure the feed or the bottom of the presser foot.

To Turn a Corner

Stop the machine with just the end of the needle inserted in the work, raise the presser foot and turn the work as desired, using the point of the needle as a pivot. Lower the presser foot and continue sewing.

The Length of Stitch

You will find the stitch regulator on the side of your sewing machine next to the bobbin winder. To alter or change the length of stitch simply move the lever either backward or forward. When it is closest to the upright body of the sewing machine it will be pointed at "1" on the index plate and will sew six stitches to the inch. When the indicator points to "0" on the opposite side of the index plate your machine will sew 34 stitches to the inch. This indicator automatically locks itself at all points and requires no screw or levers to fasten it.

The Automatic Tensions

The Damascus Grand is equipped with automatic tensions which are already set and carefully tested at the factory. They should not require further changing unless for special sewing.

With the tensions properly adjusted, the Damascus will produce a perfect stitch with the lower thread and the upper thread locked in the center of the fabric as shown at "A" Picture 12. If, for any reason, a perfect stitch is not produced, examine it from both sides of the material. If the thread on the top side of the material lies straight as illustrated at "B" Picture 12, it shows that the upper thread tension is too tight or the lower thread tension is too loose.

If the thread on the under side of the material lies straight as illustrated at "C" Picture 12, it shows that the upper thread tension is too close or the lower thread tension is too tight.

To Regulate the Tensions

The upper thread tension should be adjusted with the presser foot in the lowered position. To **increase** the upper thread tension, turn the top of the tension pulley on the face plate of the machine **toward** you.

To **decrease** the upper thread tension, turn the top of the tension pulley away from you. Do not turn the tension pulley more than $\frac{1}{4}$ of a turn at a time and test the stitch after each adjustment. No screw driver is needed for adjusting the tension pulley.

The Lower Thread Tension

Usually a perfect stitch can be obtained by adjusting only the upper tension. However, if necessary, the lower thread tension can be easily adjusted by means of the small screw which holds the tension spring on the bobbin case. Simply turn this screw, the first one from the end of the spring, slightly to the right to tighten the tension or to the left to loosen the tension. Do not turn the screw more than a $\frac{1}{4}$ of a turn at a time and test the stitch after each adjustment. When regulating the lower thread tension, be sure that there is **no lint or broken threads under the shuttle spring**.

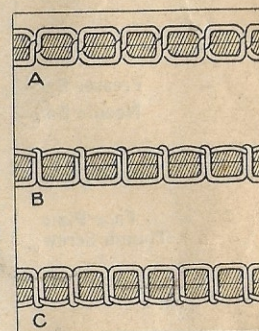
The Proper Size Needle and Thread to Use

ize of Needle	Size of Cotton Thread	Size of Silk Thread	Kind of Material Being Sewed
1	300 to 500	0000 Silk Twist	The very finest sewing.
2	120 to 200	000 Silk Twist	Very fine linens, thin muslins, etc.
3	90 to 110	00 Silk Twist	Very fine calicoes, shirtings, etc.
4	70 to 80	A or 0 Silk Twist	General domestic goods, sheetings, muslins, silks and general sewing.
5	40 to 60	B Silk Twist	Unbleached cotton or linen.
6	12 to 36	C Silk Twist	Heavy calicoes and silks. Light woolen goods.
7	0 to 10	D Silk Twist	Ticking, woolen goods and clothing.
8	0 to 10	E Silk Twist	Heavy woolens. Very coarse, soft goods.

If you wish to sew with a stitch that will ravel easily, adjust the upper thread tension until it is so light that the thread will not be drawn into the goods but will lie in a straight line as shown at "C" Picture 12.

For sewing on flannel or bias seams, use a fine stitch and a very light tension. This will leave the thread loose enough in the seam to allow for the necessary stretching of the goods.

Thread tensions will be easier to understand after you have used machine.



Picture 19. The upper picture A shows a perfect stitch. B and C show stitches when the tensions are improperly adjusted.

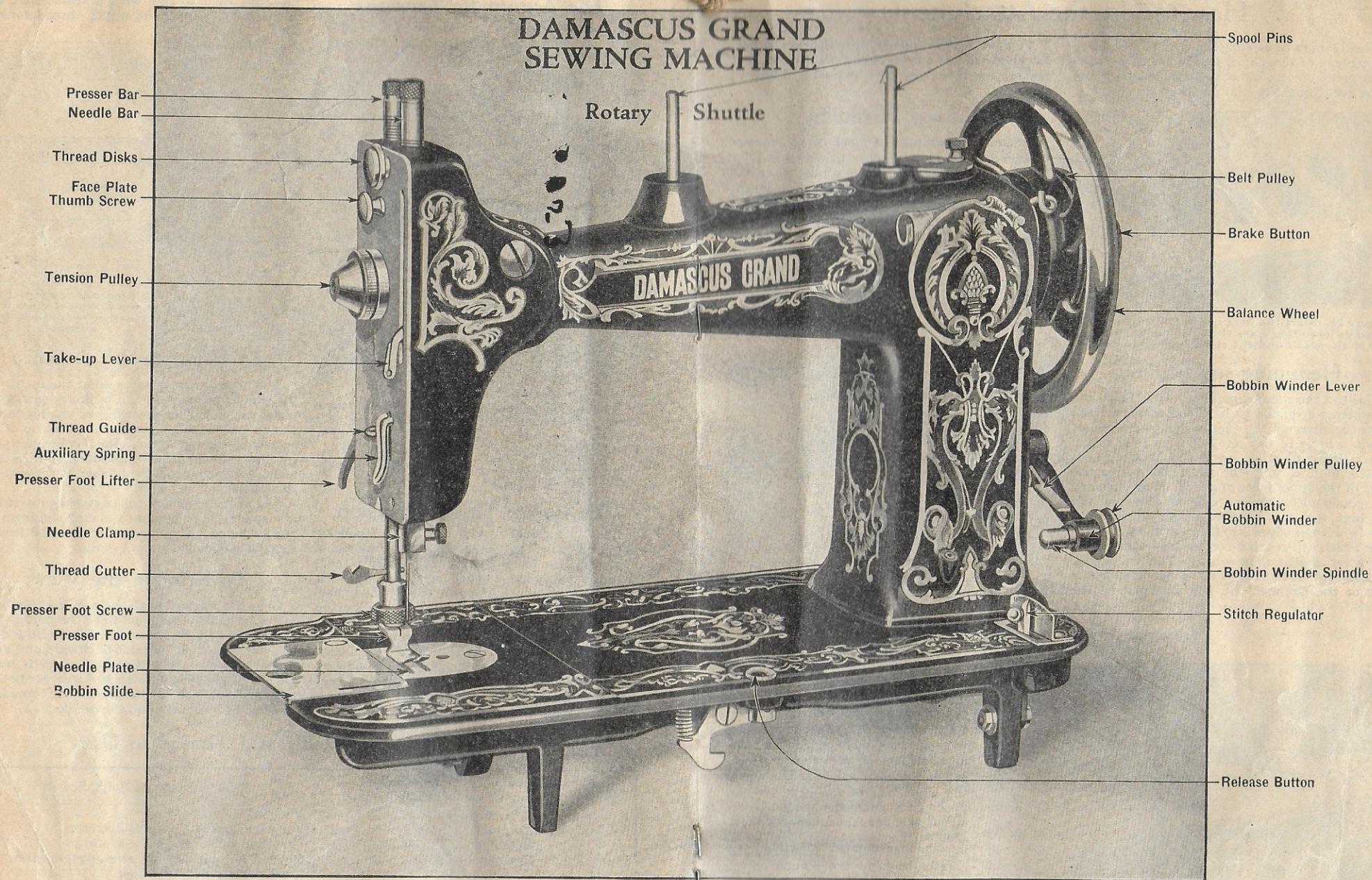
To Regulate the Pressure

The presser foot is adjusted at the factory to the proper pressure for all ordinary sewing. If you desire a lighter pressure for sewing on fine silk or very light material, turn the top of the presser bar up or to the left. If a heavier pressure is required for sewing heavy or thick material, turn the top of the presser bar down or to the right.

The proper pressure to use on the presser foot is just enough to prevent the material from rising with the needle and to enable the feed to move the material along evenly.

To Remove the Work

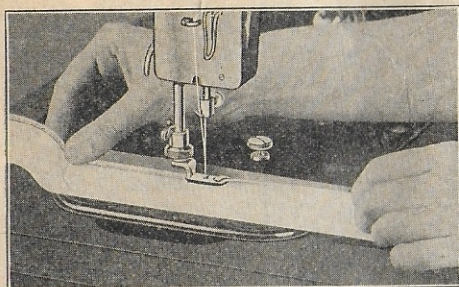
Stop the machine with the needle at the highest point of its stroke and raise the presser foot by means of the presser bar lifter. Now draw the work from the left side backward and away from the presser foot. Cut both threads on the thread cutter which is attached near the bottom of the presser bar. Do not break the threads by pulling, as this may bend the needle.



You will find it helpful to refer to this picture and identify the sewing parts as they are explained in the instructions

How to Use the Attachments

The Damascus is supplied with a complete assortment of attachments which can be used for a great variety of work after you have become accustomed to plain sewing.

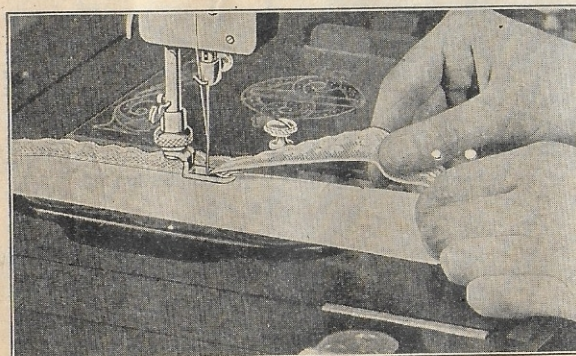


Picture 20. Start the hemmer in this manner. To continue hemming place the left hand at the front end of the cloth and the right hand next to you.

Hemming and Felling

Use the hemmer for making a fell. Place the two pieces of goods to be felled with the face sides together and the edge of the lower piece of goods a little to the right of the upper piece. Stitch them together using the hemmer as a presser foot, keeping the seam just inside the edge of the upper piece of goods. Now open out the goods with the face side flat down on the machine with the edges standing straight up. Now guide the edges into the mouth of the hemmer which will stitch down the raw edges making what appears like a hem. The amount of goods required to make a fell depends upon the size of the hemmer and the thickness of the goods.

Hemming and Sewing on Lace

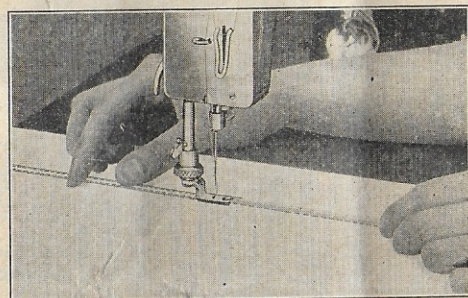


Picture 22. Guide the cloth with the left hand so the mouth of the hemmer is kept just full. The right hand guides the lace into the slot of the hemmer so the needle will pierce it.

To use the attachments, raise the presser bar, loosen the milled nut just above the presser foot and remove the presser foot by pulling it toward you.

Narrow Hemming

Attach the hemmer in place of the presser foot and screw the milled nut down until the hemmer is held securely. Clip off the right corner of the goods to be hemmed and turn up the edge for about $\frac{1}{4}$ -inch. Insert the cloth in the hemmer and push it along until it is under the needle. Now let down the presser foot and commence to sew, keeping the edge of the cloth turned as it feeds into the scroll or mouth of the hemmer. To produce a smooth, even hem, the mouth of the hemmer must be kept just full. The stitch may be laid close to the edge of the hem or away from it by adjusting the hemmer to the right or left.



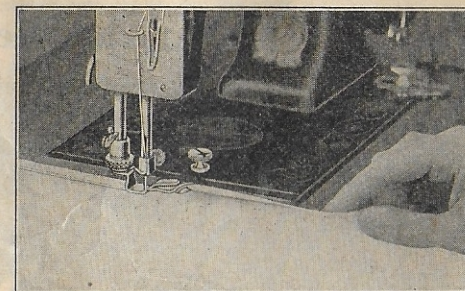
Picture 21. After you have the hem started, use the thumb and forefinger of your right hand to guide the raw edges of the cloth through the hemmer.

Hemming and sewing on lace may be done at one operation by using the foot hemmer. Start the hem as described at the top of this page, and when well started, stop the machine with the needle at the highest point of its stroke. Now raise the presser bar and insert the lace in the slot in the right side of the hemmer and pull it back under the needle. Lower the presser bar and continue to sew, guiding the cloth with the left hand and the lace with the right hand. Be careful to keep the mouth of the hemmer full and guide the lace far enough into the slot of the hemmer so it will be pierced by the needle.

Lace insertion may be sewed in by following this same method.

Wide Hemming

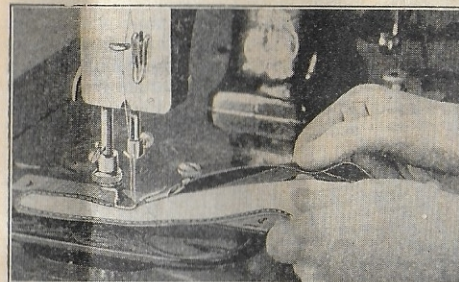
Four hemmers of different widths are furnished with the Damascus. Select the one you wish to use and attach it to the presser bar in place of the presser foot. Raise the presser bar and guide the cloth into the scroll of the hemmer by placing the left hand behind the hemmer and the right hand in front. Draw the goods back and forth a few times, feeding them into the hemmer until the scroll is filled completely. Draw the goods toward you to start the hem, lower the presser bar and proceed to sew the same as for narrow hemming.



Picture 23. Start the hem and then feed the goods so the scroll of the hemmer is kept completely full.

Binding

The foot binder is similar to the hemmers but has two scrolls instead of one. Remove the presser foot from the holder on the pressure bar and insert the binder.



Picture 24. The binding fills the scrolls of the binder and the cloth is inserted between the scrolls.

For best results use binding that is cut on the bias and seven-eighths of an inch wide. Pass the binding into the scroll of the binder until it has passed through and the end comes under the needle. Now insert the edge of the cloth or material to be bound between the folds of the scrolls. Lower the presser bar and proceed to sew, guiding the cloth with the left hand and the binding with the right hand. Watch the sewing carefully to see that the cloth is kept the required distance inside the scroll opening and that the binding does not become twisted.

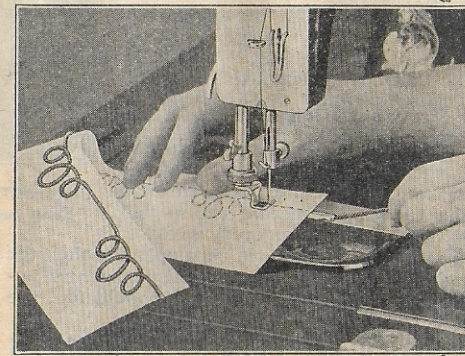
The binder can be used for making French folds in the same manner as sewing on binding except that the fold is stitched on the face of the material instead of on the edge.

In binding scallops, hold the cloth a little more firmly than the binding itself so that the cloth will not be drawn or puckered by the binding. After completing a curve in a scallop stop the machine with the needle in the goods. Then fold the elbow or angle of the next scallop, so as to form as nearly as possible a straight line with the one just bound, and continue sewing.

Sewing on Braid

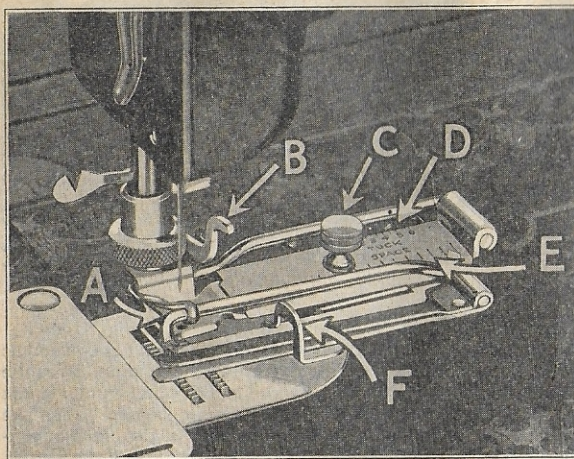
Remove the regular presser foot from the holder on the presser bar and replace it with the braider foot which has two short prongs. The under braider plate consists of one flat piece of metal with a hollow tube across the top. You will notice a prong opposite the sharp end of the tube and another larger prong that is slightly bent on the other side of the plate. The small prong fits into the hole marked "Oil" on the right side of the needle hole. Pull the slide on the working face of the machine to the left and place the larger prong in this hole. Now pull the slide back and fasten the under braider plate down securely.

The design to be braided on the cloth must be stamped or marked on the wrong side of the material. Insert the braid in the tube of the under-braider and pass it back under the needle. Place the material, face down on the machine, lower the presser bar and proceed to sew. Follow the design with the needle and hold the braid with the left hand to keep it from twisting.



Picture 25. Sew on the wrong side of the cloth and feed the braid through the under braider slide.

How to Use the Tucker



Picture 26. Loosen the set screw C to adjust the tucker. Use the adjustment shown by the letter D to regulate the distance between the line of stitching and the fold or right hand edge of the cloth. The distance between tucks is regulated by the scale E. This adjustment creases the cloth, thus showing where to make your next fold. After you have made the adjustments tighten the set screw.

How to Begin Tucking

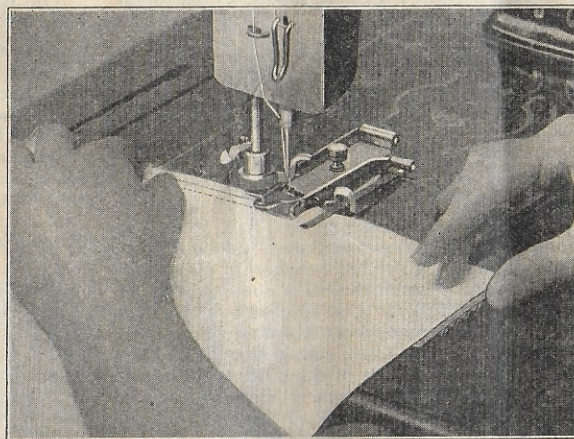
After you have adjusted the tucker for tuck and space according to the material you are going to sew you may begin your tucking. Fold the cloth where the first tuck is to be made and crease it by hand for the full length of the material. Then insert the cloth in the tucker under the blue spring with the folded edge against the guide F and pass it back under the foot of the tucker. Now you may lower the presser bar and proceed to sew.

How the Tucker Operates

The lever "B" shown in Picture 26 is the key to the operation of the tucker. As the cloth passes through the tucker the needle clamp will strike this lever with every stroke of the needle. The lever in turn operates the tuck marker "A" which automatically marks the position on the cloth where you should fold the next tuck.

When First Tuck Is Completed

When the first tuck is completed, raise the presser bar and fold the cloth along the mark



Picture 27. This illustrates the correct way to do your tucking. Each tuck should be folded under as shown by the picture.

just made by the lever A. Pass the cloth in to the tucker with the folded edge against the guide F and the edge of the first tuck against the small guide just under the lever A. Lower the presser bar and proceed to sew the second tuck. The tucker will guide the cloth without assistance. Each tuck must be folded and creased by hand before stitching.

Attach the tucker on the presser bar in place of the presser foot, being sure that the thumb screw is tightened securely and the needle passes through the needle hole in the foot of the tucker.

To adjust the tucker, loosen the set screw "C" and move the two scales as desired.

To regulate the width of the tuck (the distance from the edge of the fold to the line of stitching) use the scale marked "D" in Picture 18. Use the scale marked "E" to indicate the distance between tucks. For making blind tucks (tucks which just meet) set the scale marked "Tuck" at "1" and the scale marked "Space" at "2". To make larger tucks set them at higher figures in the same proportion. When making tucks that overlap, set the front scale at a lower figure than the back. To make tucks with a space between the tucks, set the front scale at least two figures higher than the scale at the back.

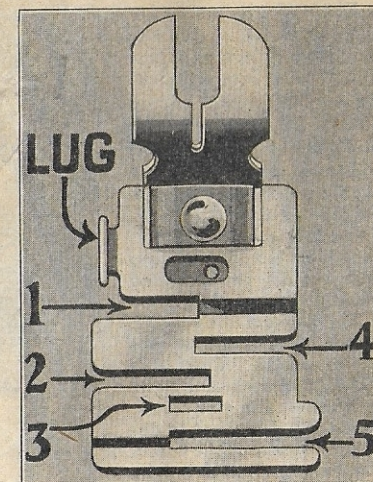
How to Use the Edge Stitcher

Remove the presser foot and attach the edge stitching attachment (Picture 28) in its place. The lug will enable you to pull the body of the edge stitcher either to the right or to the left so that you can change the width between the line of stitching and the edge of the sewing material. The five different slots shown in Picture 28 are used to guide the sewing material.

Use slots Number 1 and Number 4 for sewing together lace insertions, lace and embroidery, or lace and tucking strips.

When you are piping insert the piping in slot Number 3 and the edge of the cloth to be piped in slots Number 2 or Number 4. If you want a wide piping insert the edge of the material to be piped in slot Number 4, and if you want a narrow piping insert the edge to be piped in slot Number 2.

To make a French seam insert the edges of the two pieces of cloth to be seamed together, evenly into slot Number 5 and use the slot to guide the cloth under the needle. When you have sewed the two pieces of cloth together in this manner you have made a plain seam. Now carefully trim the edge of the cloth up close to the line of stitching, turn the cloth over and fold on the seam. Put the folded edge in slot Number 5 and repeat the sewing process. The French seam not only hides the edges of the two pieces of cloth which have been sewed together but also hides the sewing.



Picture 28. Attach the edge stitcher to the machine the same as for the presser foot.

Using Folded Tape

When using folded tape, place the tape in slot Number 1 and the garment in slot Number 5. Folded tape is sometimes used to finish underwear, children's clothes, aprons, etc.

You may buy folded tape in all colors, qualities and widths from the large Montgomery Ward & Co. General Catalogue in the same manner as you buy your other merchandise. If you wish to use folded piping, simply buy bias tape and fold it the second time.

Practical Uses of the Edge Stitcher

Very beautiful effects may be obtained in yokes, guimpes, sleeves, collar and cuff sets, lace

waists, camisoles, etc., by joining rows of lace insertion. Or you can join alternate rows of lace and embroidery insertions, or alternate rows of tucking and lace insertion.

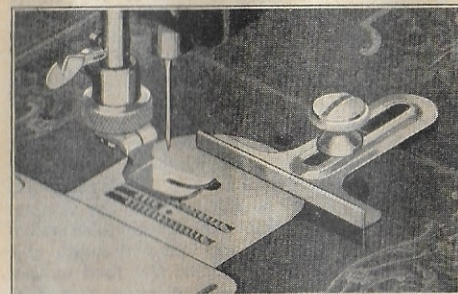
The following is a list of ways you can use this attachment. As you become familiar with it you will undoubtedly find many other ways of applying this work to your own sewing problems.

1. Piping plaits and belts for children's clothes.
2. Sewing tape to top of stocking to prevent "runners" (patented).
3. Sewing insertion on material—afterward cutting material away and turning edges back.
4. Sewing lace on the edge of a hem.
5. Sewing lace and ribbon together.
6. Covering seams with bias bands or braids.
7. Sewing braid on heavy suits and dresses.
8. Sewing on bias bands for trimming—straight or curved.

The Seam Guide

When very neat, accurate stitching is to be done and you want to make seams that are perfectly straight, the adjustable seam guide will be found a great help. The guide and the large thumb screw which attaches it to the working face of your sewing machine can be easily distinguished in Picture 29.

Simply place this attachment on the working face of the machine and fasten it with the thumb screw which is furnished. When adjusting the guide, be careful to have the edge of the guide parallel with the line of stitching.



Picture 29. You will find the adjustable seam guide a great help when you are sewing straight seams.

How to Attach and Use the Ruffler

The ruffler is attached to the presser bar in place of the presser foot with the forked lever A astride the stem of the needle clamp screw. Be sure the thumb screw of the presser bar is tightened securely and the needle passes through the center of the needle hole. The detachable guide found near C is used for shirring and should be removed when you are ruffling.

The fullness of the ruffle is controlled by the adjusting wheel B. Turn this wheel or screw to the right to increase the size of the ruffle and to the left to decrease the size of the ruffle. The length of stitch on the machine should be adjusted to suit the kind of ruffle being made. When sewing fine ruffles, always adjust the machine for a short stitch.

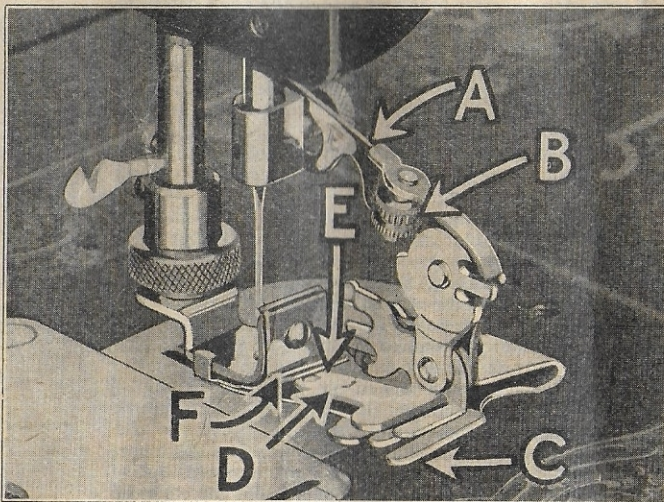
For plain ruffling, insert the cloth to be ruffled between the two blue springs of the ruffler and pass it back under the needle. Lower the presser bar and proceed to sew in the usual manner. If desired, insert the cloth between the prongs marked C to guide the cloth.

Piping With the Ruffler

When you wish to pipe while you are ruffling run the cloth to be ruffled from the right of the sewing head instead of from the left as usual. The guide C must be removed by loosening the screw on the right side of the ruffler, pushing the guide down slightly and pulling toward you. Now attach the shirring plate. Attach the shirring plate in the same manner as the under braider plate described in "Sewing on Braid" on page 15.

The detachable guide should be put in its proper place on the moving arm which holds the upper blue blade. When the stitching is close to the edge of the cloth you may make the stitching even by running the cloth through this guide. This guide can be moved a short distance either to the right or left to regulate the distance between the stitching and the edge of the cloth.

Insert the cloth to be ruffled from the right through the detachable guide, on top of the shirring plate and under the needle. If a band is to be sewed on the under side of the cloth pass it through a guide on the shirring plate and under the entire upper portion or spring of the plate up to the feed of the machine. The edge to be piped is creased for its full length and inserted in guide



Picture 30. Attach the ruffler to the presser bar in place of the presser foot with the lever A astride the screw of the needle clamp.

F of the ruffler. The piping is inserted through guide E.

If you are using a band there should now be four pieces of material in place. You can now lower the presser bar and proceed to sew.

Ruffling With Bands

Leave the lower arm attached, insert the band through the guide opening C and pass it back under the lower spring of the ruffler and next to the feed of the machine. Then insert the cloth to be ruffled above the band in the same manner as for plain ruffling. Lower the presser bar and sew in the usual manner.

When ruffling between bands place the lower band and the cloth to be ruffled as already described. Insert the upper band in the guide F and pass it back under the foot of the ruffler. Lower the presser bar and proceed to sew.

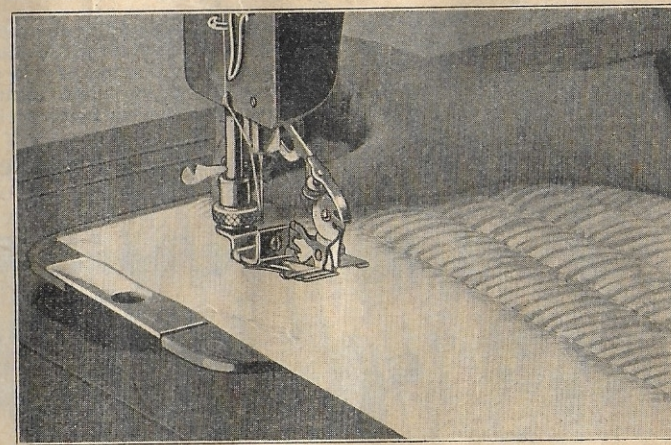
You may also edge stitch with the band on both sides of the ruffle by removing the guide C and inserting the under braider plate as already described in "Piping With the Ruffler." Then attach the detachable shirring guide.

The lower band should be run through a guide in the shirring plate, under the plate and back to the feed of the machine. Insert the cloth to be ruffled from the right under the sewing head, through the detachable guide and under the needle. Insert the top band through the guide opening F and back to the feed of the machine. You will get best results for this kind of work if you have the stitch regulator set at 12.

Shirring With the Ruffler

Attach the shirring plate to the working face of the machine by inserting the small prong opposite the needle opening into the hole marked "Oil" on the face of the machine. Then pull the slide on the working face of the machine to the left and insert the other prong on the shirring plate which is larger and slightly bent into this opening. Pull the slide back into place and fasten the shirring plate down securely.

Before attaching the ruffler remove the lower blue blade by loosening the screw on the right side of the ruffler, pushing the blade down slightly and then pulling it toward you. Then attach the ruffler to the presser bar. It is necessary to use the shirring plate instead of the lower blade of the ruffler to permit a large width of cloth.



Picture 31. If you are shirring with light materials your sewing will be firmer and look better if you run a small piece of tape underneath the goods in line with the stitching.

best to change the size of the stitch also. Make a short stitch for narrow shirring and a long stitch for wide shirring.

How to Begin Shirring

Insert the goods the same as for a plain ruffle. Lower the presser bar and sew in the usual manner. If you are sewing with light materials your sewing will be firmer and look better if you run a small piece of tape underneath the goods in line with the stitching. Insert this tape through a guide in the shirring plate so that it will pass under the upper portion or spring of the plate to the feed of the machine. In order to make the lines of stitching the same distance apart you may use the quilting guide shown in Picture 31.

Turn the screw "B" shown in Picture 30 to the right to increase the size of your shirring and to the left to decrease the size of your shirring. When changing the fullness of the shirring it is

How to Puff

A puff is a fold of material that is gathered at the edges between two perfectly smooth, un-gathered strips of material and left loose in the center. In puffing, the ruffler is used with the lower blade attached the same as for ruffling.

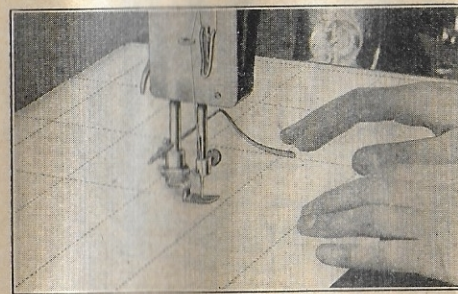
A lower band, or lace if you desire, should be inserted through the guide C and back underneath the lower blue blade. This piece of cloth will not be gathered.

Cut the material to be puffed to the proper width and insert it between the two blades, back under the needle and commence to sew.

When you have finished one side turn the material over and start sewing from the opposite edge and end, using a new band for the new edge in the same manner as for the first one. Repeat the operation as many times as necessary.

Quilting

Loosen the small screw at the back of the presser bar, remove the thread cutter and insert the quilting guide in its place as shown in Picture 32. Adjust the guide to give the right space between the guide and the needle and with the curved end of the guide high enough above the bed of the machine to allow the goods to pass under it freely. Make a crease or use the edge of the cloth as a guide for the first line of stitching. After the first line of stitching is run, place it directly under the guide and follow this for the next line of stitching and so on.



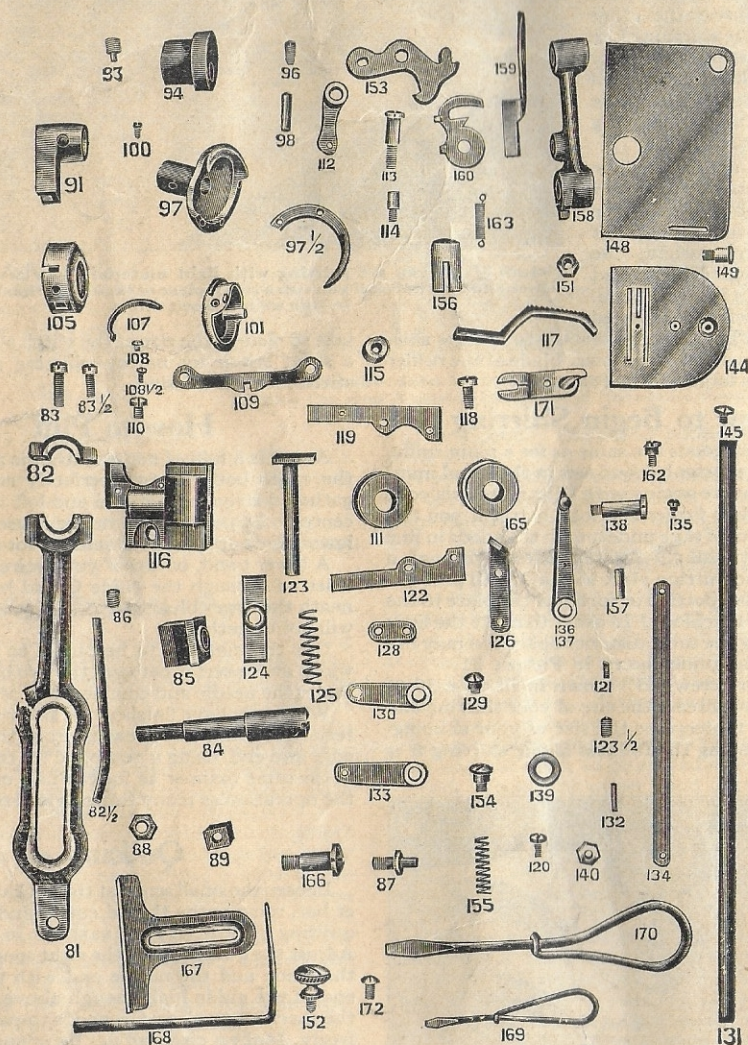
Picture 32. Feed the goods so the curved part of the quilting guide follows the previous line of stitching.

How to Order Sewing Machine Repair Parts

To obtain the quickest service order all parts from the Ward house where you bought your sewing machine. When ordering repair parts refer to page 22 or 23 for the name, number, price and postage of the part you need. Send us the

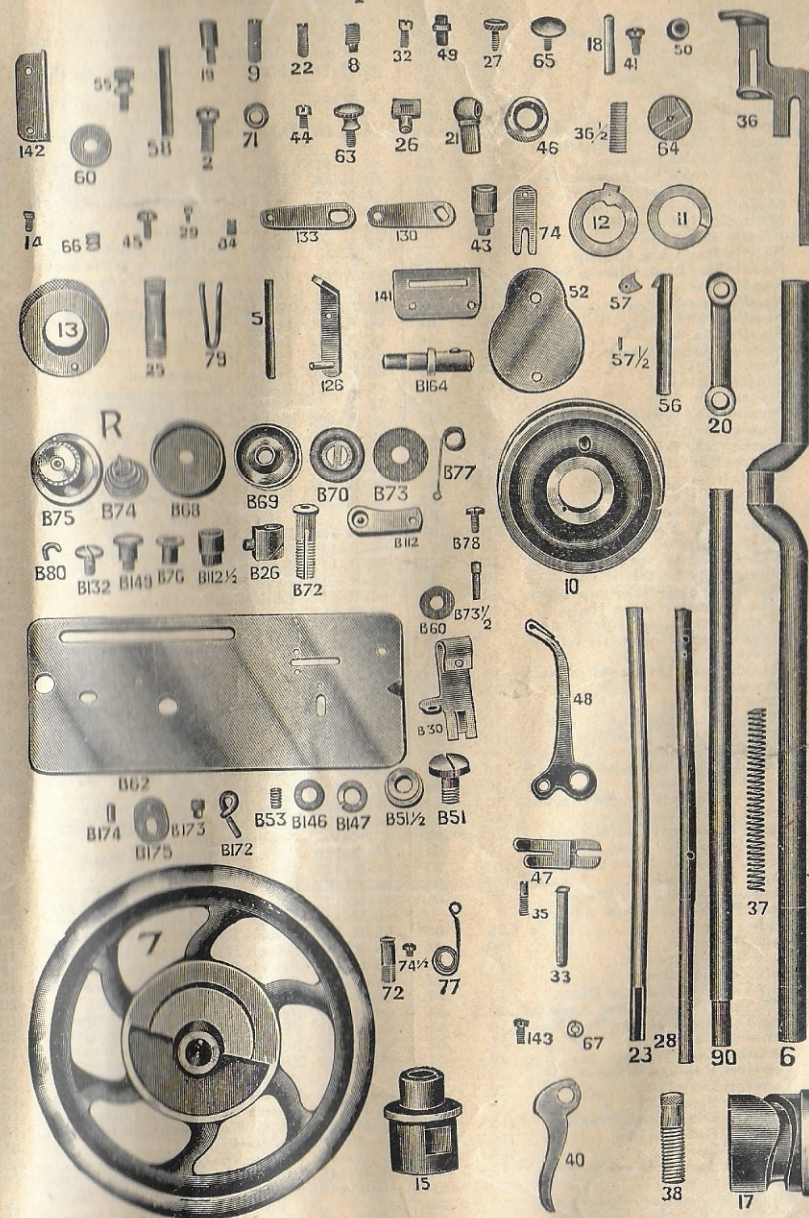
old part or an exact description of the part, and give us the full name, serial number and date of guarantee of your machine. When you write to us, be sure to mention the name and number of each part just as it is given in the repair parts list.

Damascus Grand Sewing Machine Repair Parts



Picture 33. This picture and the one on the opposite page show the different parts of your Damascus Grand sewing machine. The numbers given here are preceded by "86-R" on pages 22 and 23.

Damascus Grand Sewing Machine Repair Parts



Picture 34. When you need a new part, find the picture of the part, notice the number under the picture, and refer to the same number preceded by "86-R" on pages 22 or 23.

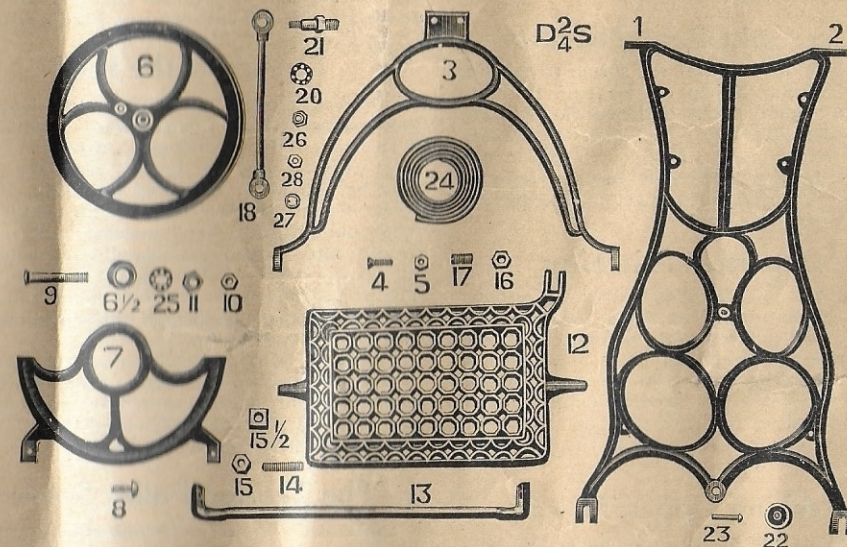
Repair Parts List for Damascus Grand Sewing Machine

Part Number	Name of Part	Price	Postage Extra
86-R-2	Arm Screw.....	\$0.10	\$0.01
86-R-3	Bed Plate (Not Illustrated).....	4.00	.16
86-R-6	Main Shaft.....	1.25	.08
86-R-7	Balance Wheel.....	2.00	.10
86-R-8	Wheel Time Screw.....	.10	.01
86-R-9	Wheel Set Screw.....	.10	.01
86-R-10	Loose Pulley.....	.60	.06
86-R-11	Loose Pulley Spring Washer.....	.10	.01
86-R-12	Loose Pulley Lock Washer.....	.10	.01
86-R-13	Wheel Brake Button.....	.25	.03
86-R-14	Wheel Brake Button Screw.....	.10	.01
86-R-17	Main Shaft Head.....	.65	.05
86-R-18	Main Shaft Head Pin.....	.10	.01
86-R-19	Main Shaft Head Stud.....	.10	.01
86-R-20	Needle Bar Link.....	.20	.02
86-R-21	Needle Bar Link Clamp.....	.15	.02
86-R-22	Needle Bar Link Clamp Screw.....	.10	.01
86-R-23	Needle Bar.....	.40	.04
86-R-24	Needle Bar Stop Pin.....	.10	.01
86-R-25	Needle Bar Cap.....	.10	.01
86-R-26	Needle Clamp.....	.50	.02
86-R-27	Needle Clamp Screw.....	.10	.01
86-R-28	Presser Bar.....	.35	.03
86-R-29	Presser Bar Gib.....	.10	.01
86-R-30	Presser Bar Gib Staple.....	.10	.01
86-R-31	Presser Bar Gib Screw.....	.10	.01
86-R-32	Presser Bar Gib Stud.....	.10	.01
86-R-33	Presser Bar Gib Stud Set Screw.....	.10	.01
86-R-34	Tension Release.....	.20	.02
86-R-35	Tension Release Spring.....	.10	.01
86-R-36	Presser Bar Spring.....	.10	.01
86-R-37	Presser Bar Spring.....	.10	.01
86-R-38	Presser Thumb Screw.....	.10	.01
86-R-40	Presser Bar Lifter.....	.15	.02
86-R-41	Presser Bar Lifter Screw.....	.10	.01
86-R-42	Attachment Holder complete.....	.50	.02
86-R-43	Attachment Holder Hub.....	.15	.02
86-R-44	At'chm't Holder Hub Screw.....	.10	.01
86-R-45	Attachment Holder Hub Foot.....	.10	.01
86-R-46	Presser Foot.....	.25	.03
86-R-48	Take Up Lever.....	.35	.03
86-R-49	Take Up Lever Stud.....	.10	.01
86-R-50	Take Up Lever Stud Roll.....	.10	.01
86-R-51	Take Up Lever Stud.....	.10	.01
86-R-51	Take Up Lever Bushing.....	.10	.01
86-R-52	Spool Pin Base.....	.10	.01
86-R-53	Take Up Lever Screw Set Screw.....	.10	.01
86-R-55	Spool Pin Base Screw.....	.10	.01
86-R-56	Spool Pin (Rear) with Pawl.....	.15	.02
86-R-57	Rear Spool Pin Pawl.....	.10	.01
86-R-57	Rear Spool Pin Pawl Pin.....	.10	.01
86-R-58	Spool Pin (Front).....	.10	.01
86-R-60	Tension Disc Cloth Wash.....	.10	.01
86-R-61	Face Plate complete Assembled.....	1.75	.08
86-R-62	Face Plate.....	.50	.05
86-R-63	Face Plate Screw.....	.10	.01
86-R-64	Top Tension Base.....	.15	.02
86-R-65	Top Tension Release Disc.....	.10	.01
86-R-66	Top Ten. Release Disc Spring.....	.10	.01
86-R-67	Top Tension Release Disc Nut.....	.10	.01
86-R-68	Tension Base.....	.25	.02
86-R-69	Tension Disc Wheel.....	.10	.01
86-R-70	Tension Release Washer.....	.10	.01
86-R-71	Tension Disc Hub.....	.20	.02
86-R-72	Tension Sleeve.....	.15	.02
86-R-73	Tension Disc Cloth Wash.....	.10	.01
86-R-73	Tension Release Pin.....	.10	.01
86-R-74	Tension Spring.....	.10	.01
86-R-74	Tension Spring Screw.....	.10	.01
86-R-75	Tension Cap.....	.30	.02
86-R-76	Auxiliary Tension Head.....	.10	.01
86-R-77	Auxiliary Tension Spring.....	.10	.01
86-R-78	Auxiliary Tension Head Screw.....	.10	.01
86-R-79	Auxiliary Thread Guide.....	.10	.01
86-R-80	Thread Guide.....	.10	.01

Repair Parts List for Damascus Grand Sewing Machine

Part Number	Name of Part	Price	Postage Extra
86-R-152	Cloth Guide Screw.....	.10	.01
86-R-153	Bed Latch.....	.10	.01
86-R-154	Bed Latch Screw.....	.10	.01
86-R-155	Bed Latch Spring.....	.10	.01
86-R-156	Bed Latch Plunger.....	.10	.01
86-R-157	Bed Latch Plunger Pin.....	.10	.01
86-R-157	Spooler complete.....	1.50	.05
86-R-158	Spooler Frame.....	.35	.04
86-R-159	Spooler Release Lever.....	.15	.02
86-R-160	Spooler Release Lever Washer.....	.15	.02
86-R-162	Spooler Release Lever Screw.....	.10	.01
86-R-163	Spooler Release Lever Spring.....	.10	.01
86-R-164	Spooler Spindle.....	.20	.02

Repair Parts for Sewing Machine Stand



Part Number	Name of Part	Price	Postage Extra
86-ST-1	Right Leg.....	\$2.75	\$0.46
86-ST-2	Left Leg.....	2.75	.46
86-ST-3	Brace.....	1.20	.22
86-ST-4	Brace Bolt and Nut.....	.10	.01
86-ST-6	Wheel.....	1.75	.16
86-ST-6	Wheel Cup.....	.10	.01
86-ST-7	Wheel Guard.....	.70	.12
86-ST-8	Wheel Guard Screw.....	.10	.01
86-ST-9	Wheel Stud.....	.25	.03
86-ST-10	Wheel Stud Nut.....	.10	.01
86-ST-11	Wheel Stud Cone.....	.10	.01
86-ST-12	Treadle.....	1.50	.18
86-ST-13	Treadle Support.....	.40	.10
86-ST-14	Treadle Center Screw.....	.10	.01
86-ST-15	Treadle Center Screw Nut.....	.10	.01
86-ST-16	Treadle Pitman Cent. Screw.....	\$0.10	\$0.01
86-ST-17	Treadle Pitman Cent. Screw.....	.10	.01

Part Number	Name of Part	Price	Postage Extra
86-ST-18	Pitman Complete.....	.75	.08
86-ST-18	Pitman Ball Retainer with Balls.....	.20	.02
86-ST-19	Pitman Ball Stud.....	.15	.02
86-ST-20	Pitman Ball Stud Adjustment Screw.....	.10	.01
86-ST-21	Ball Retainer Complete with Balls.....	.10	.01
86-ST-22	Caster.....	.10	.01
86-ST-23	Caster Pin.....	.10	.01
86-ST-24	Belt.....	.45	.04
86-ST-25	Wheel Stud Ball Retainer Complete with Balls.....	.20	.04
86-ST-26	Pitman Stud Cone.....	.10	.02
86-ST-27	Pitman Stud Cone Washer.....	.10	.01
86-ST-28	Pitman Stud Nut.....	.10	.01

How to Order Repair Parts for Stand

When ordering repair parts for the stand, refer to Page 23 for the name, number, price and postage of the part wanted. Send us the old part or an exact drawing of the part you want, and give us the full name, serial number and date of guarantee of your machine. The information should be sent to the Ward house where you purchased your machine.

If the old part is sent to us when ordering repairs, consult our General Catalogue for directions on how to send merchandise to us. By sending us the old part you are sure to receive exactly the part you require and you know it will fit your machine properly. You will receive the same quick service on repair parts that you do on other merchandise ordered from Ward's.

The Care of Your Damascus Sewing Machine

The most important thing to remember in the care of your machine is **good oil, properly applied**. A little oil on the bearings each time the machine is used will keep it running smoothly and easily for years to come.

Use Only Good Needles

Use only needles that are suited to the Damascus Sewing Machine. Be sure that the needle is properly seated in the needle clamp and that it does not strike or rub against the presser foot or needle plate. The point of the needle should enter the needle hole just a little to the right of the center. Do not attempt to use bent or blunt needles.

Imperfect Stitching

Skipped or long stitches at intervals are usually caused by using the wrong size needle or thread. Consult the table on Page 11 for the proper size needle and thread to use. Skipped stitches sometimes result if the needle is not properly seated in the needle clamp or if it is bent or blunt, or if lint or dirt has collected in the groove cut for the needle in the face of the bobbin case.

Breaking Upper Thread

Breaking of the upper thread may result if the machine is improperly threaded (see the instructions on Page 9). If the upper tension is too tight it may pull the needle to one side and cause it to strike the presser foot or needle plate, breaking the needle or thread. A soft, easy tension is required (see Page 11 for instructions on adjusting the tensions).

Breaking Lower Thread

Breaking of the lower thread is sometimes caused by too much tension on the bobbin case tension spring or by lint or broken threads gathering under the tension spring. If the bobbin is wound too full it will not revolve freely and may cause the lower thread to break.

When a machine has been used for many years, the bobbin case becomes worn and very sharp,

and may cut the lower thread. We carry new parts in stock and can supply you promptly. When ordering a new bobbin case, give us the full name and serial number of your machine. If possible, send us your old part as a sample. It will be returned with the new bobbin case.

To Adjust the Feed

The feed is composed of the three pieces of grooved metal that move backward and forward in the slots of the needle plate. After you have used your machine for several years the feed may become worn and need adjusting. The screw that adjusts the height of the feed is directly underneath the hole marked "oil" on the needle plate. Remove the small screw holding the needle plate in position and lift out the plate. The adjustment screw will now be seen in the center of a lever that is part of the feed mechanism.

To raise the feed turn this screw in the center of the feed lever to the right. When the feed is properly adjusted it should be about one-sixteenth of an inch above the level of the needle plate when the feed is at the highest point.

The Tension Pulley Screw

Caution: Do not under any circumstances turn the stationary slotted screw on which the tension disc turns. If this screw is turned you will break or destroy the tension pulley. The only adjustment that is necessary is the turning of the tension disc as described on page 11. Do not oil the tension pulley.

To Adjust the Belt

The machine will work best if the belt is kept just tight enough to run the automatic bobbin winder. If it is too loose it will slip and cause the machine to sew unevenly. If it is too tight, the machine will run hard. To tighten the belt, remove the coupling and cut about $\frac{1}{2}$ -inch off one end of the belt and refasten the coupling. Keep the belt pulley of the balance wheel free of oil and dirt.

A Machine to Be Proud of

We know that you will be pleased with your new sewing machine and that you will be proud to show it to your friends and neighbors. You will be delighted with its easy running qualities and with the neat, attractive sewing which you can do with it. As you become more familiar with its operation you will find that you are able to do much of the sewing that was formerly left for the professional seamstress. In many cases a sewing machine is made a source of profit by doing sewing for friends and neighbors who have no machine.

Our Service Department

We have told you in this book just how to operate and care for your machine so it will give you the best possible service for years to come. If there is anything that is not quite clear to you, or if we can be of any help to you, we want you to consult our Service Department freely. Do not let unknown repair men tamper with your machine. If you need any advice, write to our Service Department at the house where you bought your machine. We have here a group of trained men who are able to give you reliable information. These men know all about your machine and are qualified to give you expert advice.

If You Need Advice

If, at any time, you should feel that your machine is in need of repairs, write and tell us the full name, serial number and date of guarantee of your machine. Tell us just how your machine acts and just what you have done to try to make the machine work as you think it should. If possible, send us a small sample of your work. We can often suggest some simple adjustment that you can make yourself and save you the bother of sending the machine to us to be repaired. If we are not able to help you get perfect results, we will send you shipping instructions telling you just how to send the machine to us to be repaired and put in working order.

Instruction Book for Ward's

Damascus Grand Sewing Machine

Rotary Shuttle



ESTABLISHED 1872

*The Oldest Mail Order House Is Today
the Most Progressive*

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McGomery Ward & Co.

Satisfaction Guaranteed or Your Money Back

Kansas City St. Paul Baltimore
Oakland Fort Worth Denver

D-106

Certificate of Guarantee



PORTLAND, ORE.



CHICAGO



OAKLAND, CALIF.



KANSAS CITY



BALTIMORE



FORT WORTH



ST. PAUL

Special Twenty Year Sewing Machine Guarantee

In addition to the terms of our Complete Guarantee

WE guarantee the material and workmanship of this Sewing Machine, and that the mechanism will operate perfectly when the printed instructions packed with the machine are followed. This machine has been accurately adjusted, carefully inspected and thoroughly tested with both silk and cotton thread.

We will make good any defects in material or workmanship which develop within a period of twenty years. If at any time during the life of this guarantee it becomes necessary to send the machine to us for

repairs on account of defects in material or workmanship, we will put the machine in perfect running order without cost to the owner and will pay freight charges both ways.

Natural wear and tear of the parts are not considered defects in material or workmanship, nor does this guarantee apply to attachments, or to the breaking of needles, shuttles, bobbins or belts.

Montgomery Ward & Co.
Satisfaction Guaranteed or Your Money Back

Machine No. 276003
10335-5

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